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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,247	06/18/2001	Kenichi Okuyama	Q64706	8900

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EXAMINER

LEURIG, CHARLENE L

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/882,247

Applicant(s)

OKUYAMA ET AL.

Examiner

Sharlene Leurig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 08 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application):
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on June 27, 2000. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).
2. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

### *Response to Amendment*

3. The Amendment filed on April 8, 2003 has been entered and acknowledged by the Examiner. Claim 6 has been cancelled and claims 1-5 have been amended.

### *Claim Rejections - 35 USC § 102*

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Zhou et al. (6,407,408).

Regarding claim 1, Zhou discloses an organic electroluminescent display panel comprising a substrate (Figure 4, element 410) including a display panel region having a plurality of organic electroluminescent devices, first electrodes (420) formed on the

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substrate, an organic material layer (460) formed on the first electrodes, second electrodes (470) formed on the organic material layer, and a plurality of electrically conductive connecting lines (440) electrically connected to the second electrodes (column 8, lines 43-44). The connecting lines are formed in a domain surrounding the display panel region on the substrate, as can be seen in Figure 5, where element 440 is outside of the overlapping region of the first and second electrodes (elements 420 and 470), the overlapping region being the display panel region. Each of the organic electroluminescent devices is formed of the first electrodes, the organic material layer and the second electrodes. The electrically conductive connecting lines can be of lower electrical resistance than the second electrodes (column 7, lines 63- 64).

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou et al. (6,407,408) in view of Qian et al. (6,339,288).

Zhou discloses an organic electroluminescent display panel as discussed above, including a plurality of electrically conductive connecting lines connected to the

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electrodes, but lacks connecting lines constituted by electrically conductive thick portions that are thicker than the electrodes.

However, it is well known in the art to provide even luminosity of the display panel.

Regarding claim 2, Qian teaches the use of connecting lines with certain dimensions to avoid voltage drop that results in uneven luminosity (column 19, line 51). The preferred dimension taught by Qian is a connecting line with an electrically conductive thick portion of 0.1 micrometers or more, or even 50 micrometers (column 19, line 60), which is taught in concert with a thinner second electrode of 10 nm to 1 micrometer (column 13, line 25).

Regarding claim 3, a connecting line 50 micrometers in height and 7 cm in length (column 19, line 64) would have greater surface area than a second electrode with the dimensions discussed above (1 micrometer wide and 7 cm long). Therefore the surface area of an individual connecting line is greater than the surface area of an individual second electrode.

Regarding claim 5, the total thickness of the connecting lines (up to 50 micrometers as discussed above) is larger than a film thickness of the second electrode (up to 1 micrometer as discussed above), which is provided on the topmost surface (Figure 6B, element 22).

Regarding claim 7, Qian's connecting lines are of uniform thickness and are made of the same material throughout (column 19, line 65).

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Therefore regarding claims 2, 3, 5 and 7 it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Zhou's connecting lines to be thicker, homogeneous, and with greater surface area than the second electrode in order to achieve an organic luminescent display panel with even luminosity, as taught by Qian.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou et al. (6,407,408) in view of applicant's admission of the prior art.

The connecting lines are made of material that is lower in resistance than a material of the second electrodes. Zhou discloses connecting lines made of a material such as aluminum (column 7, line 54) and a second electrode made of a material such as ITO (column 8, line 32). Zhou further discloses the connecting lines having lower resistance than the second electrodes (column 7, lines 63-64) but lacks explicit disclosure of the material of the connecting lines having lower resistance than the material of the second electrodes.

The applicant has admitted that aluminum has a lower resistance than ITO by disclosing that the cathode, which is made of aluminum (page 11) is made of the same material as the connecting lines (page 8) which are made of a material that is less resistant than the anode material (page 4) which is made of ITO (page 9).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a material such as aluminum for the connecting lines and a material such as ITO for the second electrodes with the intention of creating connecting

lines with lower resistance than the second electrodes because it is well known in the art that aluminum has a lower resistance than ITO.

### *Response to Arguments*

7. Applicant's arguments with respect to claims 1-5 and 7 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharlene Leurig whose telephone number is (703)305-

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4745. The examiner can normally be reached on Monday through Friday, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703)305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Sharlene Leurig  
May 20, 2003

SL

  
VIP PATEL  
PRIMARY EXAMINER